

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055816

Luminaire Tested: S123R3DR-H775D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055816  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-H775D950-X4F0-XX-UDD-F-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

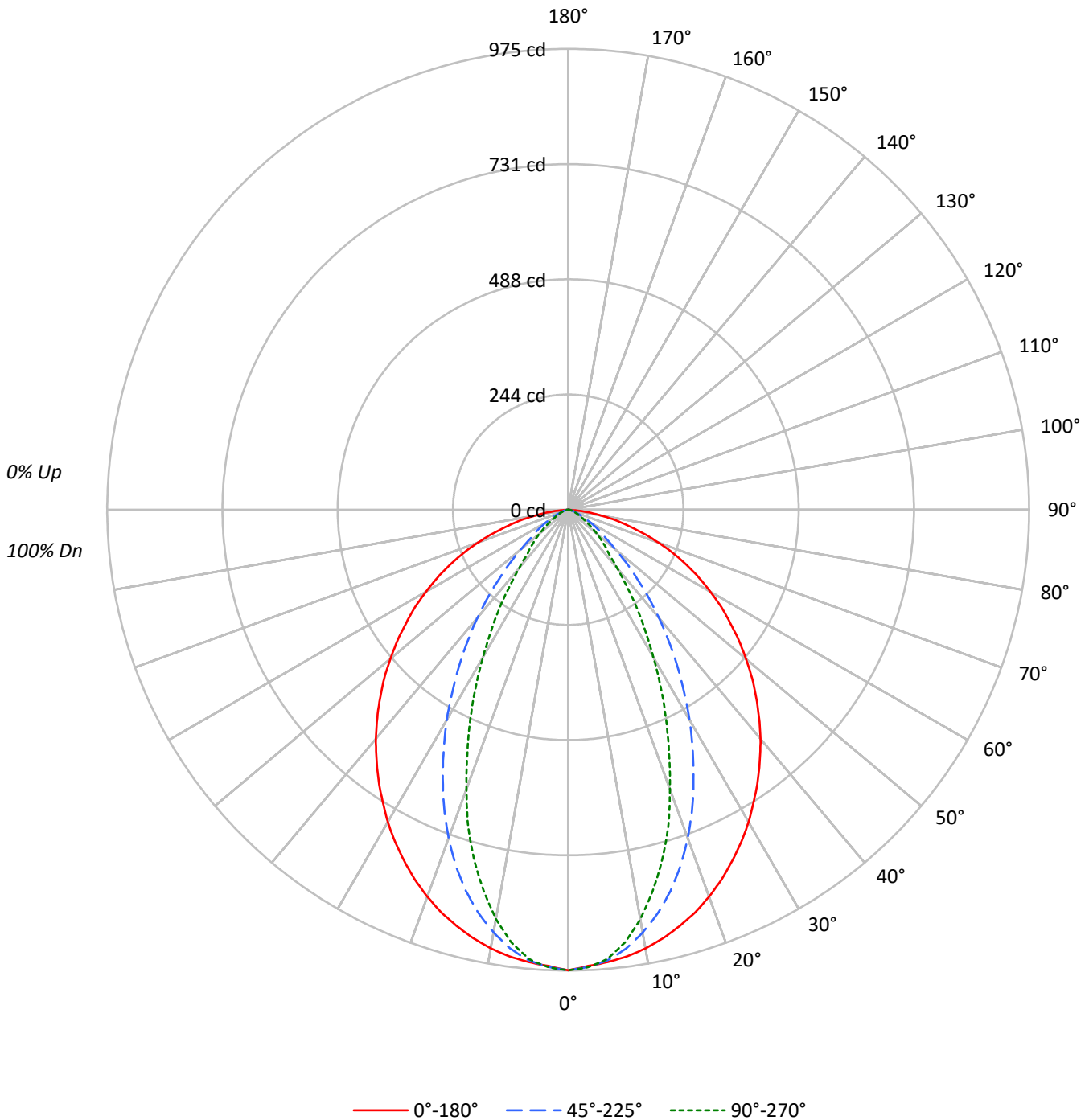
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1355.4 lumens  
Efficiency: N/A  
Efficacy: 56.9 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11750	11750	11750
5°	11628	11583	11549
10°	11536	11117	10767
15°	11381	10423	9582
20°	11178	9483	8071
25°	10914	8345	6513
30°	10624	7150	5016
35°	10292	5901	3712
40°	9959	4696	2529
45°	9593	3512	1906
50°	9202	2444	1489
55°	8797	1787	1087
60°	8377	1336	779
65°	7879	896	605
70°	7131	652	490
75°	6154	475	387
80°	4936	382	319
85°	2559	387	249

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9593 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.1	6.6
10°-20°	234.5	17.3
20°-30°	294.6	21.7
30°-40°	274.4	20.2
40°-50°	210.1	15.5
50°-60°	139.6	10.3
60°-70°	75.3	5.6
70°-80°	30.8	2.3
80°-90°	5.9	0.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	619.3	45.7
0°-40°	893.7	65.9
0°-60°	1243.4	91.7
0°-90°	1355.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1355.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	975	975	975	975	975	
5°	961	971	957	953	954	91
15°	912	897	835	786	768	257
25°	820	765	627	523	490	378
35°	699	596	401	284	252	437
45°	563	416	206	121	112	434
55°	418	242	85	59	52	375
65°	276	93	31	23	21	273
75°	132	22	10	9	8	141
85°	18	3	3	3	2	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	974.6	974.6	974.6	974.6	974.6
2.5°	966.3	978.3	968.2	969.1	969.1
5°	960.8	970.9	957.1	953.4	954.3
7.5°	953.4	959.9	936.8	924.7	922.9
10°	942.3	944.1	908.1	886.9	879.5
12.5°	928.4	922.0	874.9	839.8	825.9
15°	911.8	897.0	835.1	786.2	767.7
17.5°	893.3	868.4	789.9	726.1	704.0
20°	871.2	836.1	739.1	659.6	629.1
22.5°	847.1	801.9	685.5	591.2	557.1
25°	820.4	764.9	627.3	522.9	489.6
27.5°	792.6	725.2	570.0	458.2	424.0
30°	763.1	684.6	513.6	395.4	360.3
32.5°	730.7	640.2	455.4	337.2	302.1
35°	699.3	595.9	400.9	283.6	252.2
37.5°	666.1	551.5	348.3	236.5	201.4
40°	632.8	506.3	298.4	190.3	160.7
42.5°	597.7	461.0	251.3	151.5	128.4
45°	562.6	415.7	206.0	121.0	111.8
47.5°	527.5	370.5	166.3	104.4	95.2
50°	490.6	327.0	130.3	88.7	79.4
52.5°	455.4	283.6	101.6	73.0	64.7
55°	418.5	242.0	85.0	59.1	51.7
57.5°	384.3	199.5	70.2	46.2	40.6
60°	347.4	161.7	55.4	36.0	32.3
62.5°	312.3	126.6	42.5	28.6	25.9
65°	276.2	93.3	31.4	23.1	21.2
67.5°	240.2	67.4	24.0	18.5	17.6
70°	202.3	50.8	18.5	14.8	13.9
72.5°	166.3	36.0	13.9	12.0	11.1
75°	132.1	22.2	10.2	9.2	8.3
77.5°	101.6	12.9	7.4	7.4	6.5
80°	71.1	7.4	5.5	5.5	4.6
82.5°	43.4	4.6	3.7	3.7	3.7
85°	18.5	2.8	2.8	2.8	1.8
87.5°	2.8	0.9	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	18.37	19.73	18.74	20.04	20.36	6.95	8.30	7.31	8.62	8.93
	3H	20.13	21.33	20.51	21.66	22.02	7.61	8.82	7.99	9.15	9.51
	4H	20.83	21.95	21.23	22.30	22.68	7.81	8.93	8.21	9.28	9.66
	6H	21.34	22.37	21.75	22.74	23.14	7.93	8.96	8.34	9.33	9.73
	8H	21.48	22.46	21.91	22.85	23.25	7.96	8.94	8.39	9.33	9.74
	12H	21.53	22.47	21.96	22.85	23.28	7.97	8.91	8.41	9.29	9.72
4H	2H	18.18	19.30	18.58	19.65	20.04	7.50	8.63	7.90	8.98	9.36
	3H	19.97	20.89	20.39	21.30	21.70	8.30	9.23	8.72	9.63	10.03
	4H	20.67	21.49	21.10	21.91	22.35	8.56	9.38	9.00	9.80	10.25
	6H	21.24	21.95	21.70	22.39	22.86	8.76	9.47	9.22	9.91	10.38
	8H	21.41	22.08	21.88	22.52	22.99	8.81	9.47	9.28	9.92	10.39
	12H	21.50	22.09	21.98	22.57	23.04	8.84	9.43	9.33	9.91	10.39
8H	4H	20.54	21.21	21.01	21.65	22.12	8.87	9.54	9.34	9.98	10.45
	6H	21.10	21.64	21.60	22.14	22.62	9.12	9.66	9.62	10.16	10.64
	8H	21.27	21.76	21.80	22.27	22.77	9.21	9.69	9.73	10.21	10.70
	12H	21.38	21.81	21.89	22.30	22.87	9.29	9.72	9.80	10.21	10.78
12H	4H	20.50	21.09	20.99	21.57	22.04	8.92	9.51	9.40	9.99	10.46
	6H	21.04	21.53	21.56	22.04	22.53	9.17	9.65	9.69	10.17	10.66
	8H	21.24	21.66	21.75	22.16	22.73	9.29	9.72	9.81	10.22	10.79